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SEQUENCE LISTING

<110> Schnable, Patrick S.
Liu, Feng
Fu, Yan

<120> NUCLEIC ACID MOLECULES ENCODING MULTIPLE
START CODONS AND HISTIDINE TAGS

<130> 08411-027001

<140> US 09/897,776

<141> 2001-06-29

<150> US 09/732,990

<151> 2000-12-08

<150> US 60/169,725

<151> 1999-12-08

<160> 37

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<210> 1

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<220>

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<222> (88)...(93)

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Lys Leu His His His His His His Ala Ser Pro Pro Pro Pro Arg Ile
1 5 10 15

48

atc atc acc atc acc tcg agc gtc aca cta gct gag taa gca tgc
Ile Ile Thr Ile Thr Ser Ser Val Thr Leu Ala Glu Ala Cys
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93

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cctcga 66

<210> 3
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<400> 3
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<400> 4
ctaggcgccg gcgacgtctc ga 22

<210> 5
<211> 16
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<400> 5
ctagctgcag atatca 16

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<400> 6
agcttgatat ctgcag 16

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ccatcgatcc gagatagggt tgagt 25

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<400> 8
 acgagctcag gcagagacga

20

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<400> 9
 acgagctcgc agagacgacg

20

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 cctcgagtca cacaggaaac agctaa

26

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 gtggagcatc tggtcgca

18

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37

<210> 14
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 <212> DNA
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<400> 14
 ctagccgaaa ttaatacgac tcactatagg gagac

35

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<400> 15
 tatacatatg gcatggcatg gccactgcag gatccaccac catcatcatc acgcatcacc
 accacc

60
66

<210> 16
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 tgatgcg

60
67

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60
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<400> 18
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<210> 19
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<220>
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<400> 19
 aattgtctcc ctatagtgag tcgtattaat ttcgg

35

<210> 20
 <211> 28
 <212> PRT
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<400> 20
 Lys Leu His His His His His Ala Ser Pro Pro Pro Pro Arg Ile
 1 5 10 15
 Ile Ile Thr Ile Thr Ser Ser Val Thr Leu Ala Glu
 20 25

<210> 21
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<221> CDS
 <222> (80)...(91)

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 Ser Phe Thr Thr Ile Ile Ile Thr His His His His His His Ala Ser
 1 5 10 15

49

tca tca cca tca cct cga gcg tca cac tag ctg agt aag cat
 Ser Ser Pro Ser Pro Arg Ala Ser His Leu Ser Lys His

91

20

25

gc

93

<210> 22
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<220>
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<400> 22
 Ser Phe Thr Thr Ile Ile Ile Thr His His His His His His Ala Ser
 1 5 10 15
 Ser Ser Pro Ser Pro Arg Ala Ser His
 20 25

<210> 23
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<400> 23
 Leu Ser Lys His
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<220>
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<221> CDS
 <222> (84)...(92)

<400> 24
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 Ala Ser Pro Pro Ser Ser Ser Arg Ile Thr Thr Thr Thr His
 1 5 10 15

cat cat cac cat cac ctc gag cgt cac act agc tga gta agc atg 92
 His His His His His Leu Glu Arg His Thr Ser Val Ser Met
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c

93

<210> 25
 <211> 26

<212> PRT

<213> Artificial Sequence

<220>

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<400> 25

Ala Ser Pro Pro Ser Ser Ser Arg Ile Thr Thr Thr Thr Thr His His
1 5 10 15
His His His His Leu Glu Arg His Thr Ser
20 25

<210> 26

<211> 93

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated oligonucleotide

<400> 26

gcatgcttac tcagctagtg tgacgctcga ggtgatggtg atgatgatgc gtgggtggtgg 60
tggtgatgcg tgatgatgat ggtggtgaag ctt 93

<210> 27

<211> 118

<212> DNA

<213> Artificial Sequence

<220>

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<222> (1) ... (99)

<221> CDS

<222> (103) ... (117)

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tat aca tat ggc atg gca tgg cca ctg cag gat cca cca cca tca tca 48
 Tyr Thr Tyr Gly Met Ala Trp Pro Leu Gln Asp Pro Pro Pro Ser Ser
 1 5 10 15

tca cgc atc acc acc acc acc ata ggc cat cat cat cac cat cac act 96
Ser Arg Ile Thr Thr Thr Thr Ile Gly His His His His His His Thr
20 25 30

agc tga gta agc atg cga cgt c 118
Ser Val Ser Met Arg Arg
35

<210> 28.

$\langle 211 \rangle$ 33

<212> PRT

<213> Artificial Sequence

$\langle 220 \rangle$

<223> Synthetically generated peptide

<400> 28

Tyr Thr Tyr Gly Met Ala Trp Pro Leu Gln Asp Pro Pro Pro Ser Ser
 1 5 10 15
 Ser Arg Ile Thr Thr Thr Thr Ile Gly His His His His His His Thr
 20 25 30
 Ser

<210> 29

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated peptide

<400> 29

Val Ser Met Arg Arg
 1 5

<210> 30

<211> 118

<212> DNA

<213> Artificial Sequence

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<222> (107)...(118)

<400> 30

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 Ile His Met Ala Trp His Gly His Cys Arg Ile His His His His His
 1 5 10 15

cac gca tca cca cca cca cca tag gcc atc atc atc acc atc aca cta 97
 His Ala Ser Pro Pro Pro Pro Ala Ile Ile Ile Thr Ile Thr Leu
 20 25 30

gct gag taa gca tgc gac gtc 118
 Ala Glu Ala Cys Asp Val
 35

<210> 31

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated peptide

<400> 31

Ile His Met Ala Trp His Gly His Cys Arg Ile His His His His His
 1 5 10 15
 His Ala Ser Pro Pro Pro Pro
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<210> 32

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated peptide

<400> 32

Ala Ile Ile Ile Thr Ile Thr Leu Ala Glu
 1 5 10

<210> 33

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated peptide

<400> 33

Ala Cys Asp Val

<210> 34

<211> 118

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<400> 34

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 1 5 10 15

47

atc acg cat cac cac cac cac cat agg cca tca tca tca cca tca cac
 Ile Thr His His His His His His Arg Pro Ser Ser Ser Pro Ser His
 20 25 30

95

tag ctg agt aag cat gcg acg tc
 Leu Ser Lys His Ala Thr
 35

118

<210> 35
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 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated peptide

<400> 35
 Tyr Ile Trp His Gly Met Ala Thr Ala Gly Ser Thr Thr Ile Ile Ile
 1 5 10 15
 Thr His His His His His Arg Pro Ser Ser Ser Pro Ser His
 20 25 30

<210> 36
 <211> 6
 <212> PRT
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<220>
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<400> 36
 Leu Ser Lys His Ala Thr
 1 5

<210> 37
 <211> 118
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 37
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 tgatgcgtga tgatgatggt ggtggatcct gcagtggcca tgccatgcca tatgtata 118